

ARTICLES BY TITLE

INDEX TO VOLUME 42

JANUARY THROUGH DECEMBER, 1969

A different technique for the evaluation of $\int \sec \theta d\theta$, <i>C. T. Whyburn</i>	113
A doodling problem involving the density of segment-generated sets of points in regions of a plane, <i>Larry Heacock</i>	60
A method of trisection of an angle and X -section of an angle, <i>H. T. Sheng</i>	73
A new approach to an old problem, <i>P. A. Lindstrom</i>	88
A note on Euclid's algorithm, <i>Y. J. Lee</i>	39
A note on nonhomogeneous equations, <i>Y. Kuo</i>	37
A note on sums of squares of consecutive odd integers, <i>J. A. H. Hunter</i>	145
A property of the zeros of a polynomial, <i>Joseph Mandelbaum and Albert Schild</i>	247
A simple irrationality proof for n th roots of positive integers, <i>L. J. Lange</i>	242
A theorem on arc length, <i>John Kaucher</i>	132
A transformation for classes of geometric configurations, <i>N. R. Dilley, T. M. Green and Charles Hamberg</i>	136
An alternative to the Gram-Schmidt process, <i>J. H. Staib</i>	203
An easy way from a point to a line, <i>R. L. Eisenman</i>	40
An extension of a mean value theorem, <i>A. M. Russell</i>	124
An extension of an elementary theorem in calculus, <i>K. W. Reed, Jr.</i>	266
Announcement of Lester R. Ford Awards, <i>H. L. Alder</i>	226
Another theorem relating Sylvester's matrix and the greatest common divisor, <i>M. A. Laidacker</i>	126
Biorthogonality of characteristic vectors, <i>John Christiano and Albert Wiggin</i>	133
Cofactoral matrices, <i>R. Bucher and S. Godbole</i>	142
Coin strings, <i>J. M. Gombert</i>	244
Combinatorial problems in set-theoretic form, <i>E. M. Palmer</i>	32
Conjugate diameters and the special theory of relativity, <i>R. C. Wrede</i>	227
Constructions for the solution of the m queens problem, <i>E. J. Hoffman, J. C. Loessi and R. C. Moore</i>	66
Determinants, permanents and bipartite graphs, <i>Frank Harary</i>	146
Dimension under analytic maps, <i>G. P. Speck</i>	91
Elementary transcendental functions, <i>G. P. Speck</i>	200
Euclidean constructibility in graph-minimization problems, <i>E. J. Cockayne and Z. A. Melzak</i>	206
Factorization of $x^{2n} + x^n + 1$ using cyclotomic polynomials, <i>Bryant Tuckerman</i>	41
Geometrical aspects of Newton's method, <i>Walter Jennings</i>	262
Inequalities for the derivatives of polynomials, <i>R. P. Boas, Jr.</i>	165
Iteration and correction formulas for the variance of a sequence, <i>M. J. Pascual</i>	249
Methods of solution of the Riccati differential equation, <i>D. R. Haaheim and F. M. Stein</i>	233
Morley's triangle, <i>G. L. Neidhardt and V. Milenkovic</i>	87
On an elementary inequality, <i>Chan Kai-Meng</i>	240
On analytic functions satisfying the mean value theorem and a conjecture of W. G. Dotson, <i>Zalman Rubinstein</i>	256
On palindromes and palindromic primes, <i>Hyman Gabai and Daniel Coogan</i>	252
On point transformations, <i>Joseph Verdina</i>	187
On shuffling cards, <i>E. F. Wilde and D. A. Tomandl</i>	139
On the butterfly property, <i>G. D. Chakerian, G. T. Sallee and M. S. Klamkin</i>	21
On the differential equation $f' = fog$ where $gog = I$, <i>R. G. Kuller</i>	195
On the minimal rectangular region which has the lattice point covering property, <i>E. A. Maier</i>	84
On the product of diagonal elements of a positive matrix, <i>A. R. Amir-Moez and G. E. Johnston</i>	24
On the reversing of digits, <i>L. F. Klosinski and D. C. Smolarski</i>	208
On the solutions of three ancient problems, <i>E. V. Graef and V. C. Harris</i>	28

ARTICLES BY TITLE

INDEX TO VOLUME 42

JANUARY THROUGH DECEMBER, 1969

A different technique for the evaluation of $\int \sec \theta d\theta$, <i>C. T. Whyburn</i>	113
A doodling problem involving the density of segment-generated sets of points in regions of a plane, <i>Larry Heacock</i>	60
A method of trisection of an angle and X -section of an angle, <i>H. T. Sheng</i>	73
A new approach to an old problem, <i>P. A. Lindstrom</i>	88
A note on Euclid's algorithm, <i>Y. J. Lee</i>	39
A note on nonhomogeneous equations, <i>Y. Kuo</i>	37
A note on sums of squares of consecutive odd integers, <i>J. A. H. Hunter</i>	145
A property of the zeros of a polynomial, <i>Joseph Mandelbaum and Albert Schild</i>	247
A simple irrationality proof for n th roots of positive integers, <i>L. J. Lange</i>	242
A theorem on arc length, <i>John Kaucher</i>	132
A transformation for classes of geometric configurations, <i>N. R. Dilley, T. M. Green and Charles Hamberg</i>	136
An alternative to the Gram-Schmidt process, <i>J. H. Staib</i>	203
An easy way from a point to a line, <i>R. L. Eisenman</i>	40
An extension of a mean value theorem, <i>A. M. Russell</i>	124
An extension of an elementary theorem in calculus, <i>K. W. Reed, Jr.</i>	266
Announcement of Lester R. Ford Awards, <i>H. L. Alder</i>	226
Another theorem relating Sylvester's matrix and the greatest common divisor, <i>M. A. Laidacker</i>	126
Biorthogonality of characteristic vectors, <i>John Christiano and Albert Wiggin</i>	133
Cofactoral matrices, <i>R. Bucher and S. Godbole</i>	142
Coin strings, <i>J. M. Gombert</i>	244
Combinatorial problems in set-theoretic form, <i>E. M. Palmer</i>	32
Conjugate diameters and the special theory of relativity, <i>R. C. Wrede</i>	227
Constructions for the solution of the m queens problem, <i>E. J. Hoffman, J. C. Loessi and R. C. Moore</i>	66
Determinants, permanents and bipartite graphs, <i>Frank Harary</i>	146
Dimension under analytic maps, <i>G. P. Speck</i>	91
Elementary transcendental functions, <i>G. P. Speck</i>	200
Euclidean constructibility in graph-minimization problems, <i>E. J. Cockayne and Z. A. Melzak</i>	206
Factorization of $x^{2n} + x^n + 1$ using cyclotomic polynomials, <i>Bryant Tuckerman</i>	41
Geometrical aspects of Newton's method, <i>Walter Jennings</i>	262
Inequalities for the derivatives of polynomials, <i>R. P. Boas, Jr.</i>	165
Iteration and correction formulas for the variance of a sequence, <i>M. J. Pascual</i>	249
Methods of solution of the Riccati differential equation, <i>D. R. Haaheim and F. M. Stein</i>	233
Morley's triangle, <i>G. L. Neidhardt and V. Milenkovic</i>	87
On an elementary inequality, <i>Chan Kai-Meng</i>	240
On analytic functions satisfying the mean value theorem and a conjecture of W. G. Dotson, <i>Zalman Rubinstein</i>	256
On palindromes and palindromic primes, <i>Hyman Gabai and Daniel Coogan</i>	252
On point transformations, <i>Joseph Verdina</i>	187
On shuffling cards, <i>E. F. Wilde and D. A. Tomandl</i>	139
On the butterfly property, <i>G. D. Chakerian, G. T. Sallee and M. S. Klamkin</i>	21
On the differential equation $f' = fog$ where $gog = I$, <i>R. G. Kuller</i>	195
On the minimal rectangular region which has the lattice point covering property, <i>E. A. Maier</i>	84
On the product of diagonal elements of a positive matrix, <i>A. R. Amir-Moez and G. E. Johnston</i>	24
On the reversing of digits, <i>L. F. Klosinski and D. C. Smolarski</i>	208
On the solutions of three ancient problems, <i>E. V. Graef and V. C. Harris</i>	28

On the trinomial coefficients, <i>R. L. Keeney</i>	210
On wrapping of a closed surface, <i>R. D. Glauz</i>	27
Palindromes by addition in base two, <i>Brother Alfred Brousseau</i>	254
Perfect squares of the form $(m^2-1)a_n^2+t$, <i>M. S. Klamkin</i>	111
Prime primes, <i>J. E. Walstrom and Murray Berg</i>	232
Probability theory and the Lebesgue integral, <i>Truman Bolts</i>	105
Real solutions of classes of polynomial equations, <i>S. B. Jackson</i>	128
Remarks on the functional equation $f(x+y)=f(x)+f(y)$, <i>Edwin Hewitt and H. S. Zuckerman</i>	121
Sections of n -dimensional spherical cones, <i>Nancy Keyton</i>	80
Separable functions and the generalization of matricial structure, <i>Milton Rosenberg</i>	175
Solution of an equation in a linear algebra by means of the minimal polynomial, <i>J. C. Kieffer and F. M. Stein</i>	114
Some combinatorial problems of arithmetic, <i>M. S. Klamkin and D. J. Newman</i>	53
Tangents: An elementary survey, <i>Hugh Thurston</i>	1
The application of a function to unions and intersections of sets, <i>B. L. McAllister</i>	93
The butterfly problem—extensions, generalizations, <i>W. I. Jacobson</i>	17
The coset of solutions of a system of linear equations, <i>J. E. Morrill</i>	248
The cross ratio on the real line, <i>E. G. Whitehead, Jr.</i>	193
The distribution of quadratic residues in fields of order P^n , <i>N. R. Hardman and J. H. Jordan</i>	12
The equation of a sphere, <i>M. S. Klamkin</i>	241
The language of functions—a survey and a proposal, <i>G. C. Bush</i>	259
The lattice point covering theorem for rectangles, <i>Ivan Niven and H. S. Zuckerman</i>	85
The notion of "consequence" in the predicate calculus, <i>A. H. Lightstone</i>	57
The sequence $\{\sin n\}$, <i>C. S. Ogilvy</i>	94

ARTICLES BY AUTHOR

<i>Alder, H. L.</i> , Announcement of Lester R. Ford Awards.....	226
<i>Amir-Moaz, A. R. and Johnston, G. E.</i> , On the product of diagonal elements of a positive matrix.....	24
<i>Berg, Murray</i> . See <i>Walstrom, J. E.</i>	
<i>Boas, R. P., Jr.</i> , Inequalities for the derivatives of polynomials.....	165
<i>Bolts, Truman</i> , Probability theory and the Lebesgue integral.....	105
<i>Brousseau, Brother Alfred</i> , Palindromes by addition in base two.....	254
<i>Bucher, R. and Godbole, S.</i> , Cofactoral matrices.....	142
<i>Bush, G. C.</i> , The language of functions—a survey and a proposal.....	259
<i>Chakerian, G. D., Sallee, G. T. and Klamkin, M. S.</i> , On the butterfly property.....	21
<i>Christiano, John and Wiggan, Albert</i> , Biorthogonality of characteristic vectors.....	133
<i>Cockayne, E. J. and Melzak, Z. A.</i> , Euclidean constructibility in graph-minimization problems.....	206
<i>Coogan, Daniel</i> . See <i>Gabai, Hyman</i> .	
<i>Dilley, N. R., Green, T. M. and Hamberg, Charles</i> , A transformation for classes of geometric configurations.....	136
<i>Eisenman, R. L.</i> , An easy way from a point to a line.....	40
<i>Gabai, Hyman and Coogan, Daniel</i> , On palindromes and palindromic primes.....	252
<i>Glauz, R. D.</i> , On wrapping of a closed surface.....	27
<i>Godbole, S.</i> See <i>Bucher, R.</i>	
<i>Gombert, J. M.</i> , Coin strings.....	244
<i>Graef, E. V., and Harris, V. C.</i> , On the solutions of three ancient problems.....	28
<i>Green, T. M.</i> , See <i>Dilley, N. R.</i>	
<i>Haaheim, D. R. and Stein, F. M.</i> , Methods of solution of the Riccati differential equation... ..	233
<i>Hamberg, Charles</i> . See <i>Dilley, N. R.</i>	
<i>Harary, Frank</i> , Determinants, permanents and bipartite graphs.....	146
<i>Hardman, N. R. and Jordan, J. H.</i> , The distribution of quadratic residues in fields of order P^n	12

Harris, V. C. See Graef, E. V.	
Heacock, Larry, A doodling problem involving the density of segment-generated sets of points in regions of a plane	60
Hewitt, Edwin and Zuckerman, H. S., Remarks on the functional equation $f(x+y)=f(x)+f(y)$	121
Hoffman, E. J., Loessi, J. C. and Moore, R. C., Constructions for the solution of the m queens problem	66
Hunter, J. A. H., A note on sums of squares of consecutive odd integers	145
Jackson, S. B., Real solutions of classes of polynomial equations	128
Jacobson, W. I., The butterfly problem—extensions, generalizations	17
Jennings, Walter, Geometrical aspects of Newton's method	262
Johnston, G. E. See Amir-Moez, A. R.	
Jordan, J. H. See Hardman, N. R.	
Kai-Meng, Chan, On an elementary inequality	240
Kaucher, John, A theorem on arc length	132
Keeney, R. L., On the trinomial coefficients	210
Keyton, Nancy, Sections of n -dimensional spherical cones	80
Kieffer, J. C. and Stein, F. M., Solution of an equation in a linear algebra by means of the minimal polynomial	114
Klamkin, M. S. See Chakerian, G. D.	
——, Perfect squares of the form $(m^2-1)a_n^2+t$	111
——, The equation of a sphere	241
—— and Newman, D. J., Some combinatorial problems of arithmetic	53
Klosinski, L. F. and Smolarski, D. C., On the reversing of digits	208
Kuller, R. G., On the differential equation $f' = fog$ where $gog = I$	195
Kuo, Y., A note on nonhomogeneous equations	37
Laidacker, M. A., Another theorem relating Sylvester's matrix and the greatest common divisor	126
Lange, L. J., A simple irrationality proof for n th roots of positive integers	242
Lee, Y. J., A note on Euclid's algorithm	39
Lightstone, A. H., The notion of "consequence" in the predicate calculus	57
Lindstrom, P. A., A new approach to an old problem	88
Loessi, J. C. See Hoffman, E. J.	
Maier, E. A., On the minimal rectangular region which has the lattice point covering property	84
Mandelbaum, Joseph and Schild, Albert, A property of the zeros of a polynomial	247
McAllister, B. L., The application of a function to unions and intersections of sets	93
—— See Feichtinger, Oskar.	
Melzak, Z. A. See Cockayne, E. J.	
Milenkovic, B. See Neidhardt, G. L.	
Moore, R. C. See Hoffman, E. J.	
Morrill, J. E., The coset of solutions of a system of linear equations	248
Neidhardt, G. L. and Milenkovic, V., Morley's triangle	87
Newman, D. J. See Klamkin, M. S.	
Newman, T. G. See Amir-Moez, A. R.	
Niven, Ivan and Zuckerman, H. S., The lattice point covering theorem for rectangles	85
Ogiley, C. S., The sequence $\{\sin n\}$	94
Palmer, E. M., Combinatorial problems in set-theoretic form	32
Pascual, M. J., Iteration and correction formulas for the variance of a sequence	249
Reed, K. W., Jr., An extension of an elementary theorem in calculus	266
Rosenberg, Milton, Separable functions and the generalization of matricial structure	175
Rubinstein, Zalman, On analytic functions satisfying the mean value theorem and a conjecture of W. G. Dotson	256
Russell, A. M., An extension of a mean value theorem	124
Sallee, G. T. See Chakerian, G. D.	

- Schild, Albert.* See Mandelbaum, Joseph.
- Sheng, H. T.,* A method of trisection of an angle and X -section of an angle. 73
- Smolarski, D. C.* See Klosinski, L. F.
- Speck, G. P.,* Dimension under analytic maps. 91
- , Elementary transcendental functions. 200
- Staib, J. H.,* An alternative to the Gram-Schmidt process. 203
- Stein, F. M.* See Haaheim, D. R.
- , See Kieffer, J. C.
- Thurston, Hugh,* Tangents: An elementary survey. 1
- Tomandl, D. A.* See Wilde, E. F.
- Tuckerman, Bryant,* Factorization of $x^{2n} + x^n + 1$ using cyclotomic polynomials. 41
- Verdina, Joseph,* On point transformations. 187
- Walstrom, J. E. and Berg, Murray,* Prime primes. 232
- Whithead, E. G., Jr.,* The cross ratio on the real line. 193
- Whyburn, C. T.,* A different technique for the evaluation of $\int \sec \theta d\theta$ 113
- Wiggin, Albert.* See Christiano, John.
- Wilde, E. F., and Tomandl, D. A.,* On shuffling cards. 139
- Wrede, R. C.,* Conjugate diameters and the special theory of relativity. 227
- Zuckerman, H. S.,* See Hewitt, Edwin.
- , See Niven, Ivan.

BOOK REVIEWS

EDITED BY DMITRI THORO, SAN JOSE STATE COLLEGE
BRIEF MENTION 149-152

PROBLEMS AND SOLUTIONS

EDITED BY ROBERT E. HORTON, LOS ANGELES VALLEY COLLEGE

PROPOSALS

- | | |
|--------------------------------|------------------------------|
| Agargun, Mehmet, 214. | Kohler, Alfred, 95, 213. |
| Bankoff, Leon, 267 | Kumar, Santosh, 153. |
| Blundon, W. J., 152. | Kung, S. H. L., 267 |
| Breisch, R. L., 213. | Lind, Douglas, 154. |
| Brillart, John, 43. | Lumpkin, A. H., 44. |
| Brousseau, Brother Alfred, 43. | Martino, M. J., 46. |
| Burke, T. J., 153. | Prussing, J. E., 153. |
| Cerimele, B. J., 267. | Rabinowitz, Stanley, 46, 96. |
| Charosh, Mannis, 153. | Rao, G. L. N., 153. |
| Demir, Huseyin, 96, 214, 267 | Reich, Simeon, 213. |
| Dodes, I. A., 214. | Shoemaker, R. W., 48. |
| Duncan, D. C., 267 | Singleton, C. R. J., 43. |
| Enggren, Willy, 153. | Srinivasan, S., 267 |
| Howell, J. M., 44, 47. | Trigg, C. W., 44, 95, 213. |
| Hunter, J. A. H., 95. | Vayo, H. W., 48. |
| Ivanoff, V. F., 44. | Vigder, J. S., 47. |
| Just, Erwin, 49. | Wolf, Samuel, 43. |
| Klamkin, M. S., 268 | Wulczyn, Gregory, 96. |

SOLUTIONS

- Batman, Donald, 215.
 Brendan, Brother T., 161.
 Carlitz, L., 100, 157, 272, 274.
 Charosh, Mannis, 269
 Goldberg, Michael, 158, 161, 219.
 Hafstrom, J. E., 162.
 Homer, J. E., Jr., 100.
 Howell, J. M., 162.
 Jerabek, G. J., 96.
 Klamkin, M. S., 218.
 Kohler, Alfred, 270
 Konhauser, J. D. E., 159.
 Kuenzi, N. J., 48.
 Leetch, J. F., 159.
 Leung, Gesing, 49.
 Martino, M. J., 221.
 Mond, Otto, 215.
 Moser, W., 161.
 Moylan, Edward, 44.
 Nettheim, N. F., 216.
 Netzband, Rachel H., 273
 Prussing, J. E., 46.
 Rabinowitz, Stanley, 46.
 Ribet, K. A., 272
 Rumney, Max, 156.
 Seiler, J. G., 98.
 Shoemaker, R. W., 49.
 Starke, E. P., 47, 98, 154, 218, 220.
 Sumner, D., 45.
 Trigg, C. W., 160, 268
 Usiskin, Zalman, 101.
 Vayo, H. W., 49.
 Wulczyn, Gregory, 99.
 Zwier, P. J., 272

- Comment on Problem 635, C. W. Trigg, 50*
Comment on Problem 644, C. W. Trigg, 102
Comment on Problem 691, D. E. Daykin, 103
Comment on Problem 697, R. G. Van Meter, 103
Comment on Problem 680, A. W. Walker, 162
Comment on Problem 450, Andrzej Makowski, 222
Comment on Problem 687, M. S. Klamkin, 223
Comment on Problem 711, C. T. Long, 223
Comment on Problem 533, Andrzej Makowski, 275
Comment on Problem 601, Andrzej Makowski, 276

Quickies and Answers

The page on which Quickies appear is in the parentheses following the number of these problems; the page on which the Answers appear is in boldface. 444, 445, 446, 447, 448, (52) (11); 449, 450, 451, 452, 453, (104) (90); 454, 455, 456, 457, (164) (149); 458, 459, 460, 461, 462, (225-226) (203); 463, 464, 465, 466, 467, (277) (**243-244**).

- Comment on Q434, C. R. Clements, 51*
Comment on Q411, C. W. Trigg, 163
Comment on Q440, Leon Bankoff, 163
Comment on Q442, Leon Bankoff, 164
Comment on Q424, C. W. Trigg, 224
Comment on Q426, S. Spital, 224
Comment on Q442, D. R. Morrison, 225
Comment on Q418, C. W. Trigg, 276
Comment on Q438, Lester Rubinfeld, 276

